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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,642	05/20/2005	Marc F.R. Janssen	DE 020283	7714
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EXAMINER RALEIGH, DONALD L				
ART UNIT 2879		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,642

Applicant(s)

JANSSEN ET AL.

Examiner

DONALD L. RALEIGH

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6-8 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on March 20,2008 has been entered and acknowledged by the Examiner.

Cancellation of claims 5 and 9 has been entered.

The addition of claims 11-15 has been entered.

Claims 1-4,6-8 and 10-15 are pending in the instant application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

Claim 13 recites the limitation " wherein the end closure device is configured to fit in the discharge vessel". There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation " wherein the end closure device is configured to fit on the discharge vessel ".There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "wherein the end closure device is configured to fit on the end part" . There is insufficient antecedent basis for this limitation in the claim.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elements must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

With respect to Claim 1, applicant claims "the at least one end closure device having a feed-through opening and forming a crevice between the at least one end closure device and the discharge vessel". In applicant's specification, page 15, the end closure device is identified as element (4), the feed through is (5) the crevice is (11) and the discharge vessel is (2). None of the figures show a crevice (11) between the end closure device (4) and the discharge vessel

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(2). Only Figures 2, 3, and 7 show the crevice (11) and it is located between the feed through (5) and the discharge vessel (2) not between the end closure device (4) and the discharge vessel (2). There is no space between the end closure device (4) and the discharge vessel (2) .

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Honda et al (US Patent No. 6,774,566).

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Regarding Claim 13, Honda discloses, at least in Figure 4, the high-pressure burner, wherein the end closure device (4) is configured to fit in the discharge vessel. Element 4 consists of a sealing compound (Column 19, line 65) which would take the shape of the opening (configured to fit).

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Pabst et al (US Patent No. 5,075,587).

Regarding Claim 14, Pabst discloses, at least in Figure 4, the high-pressure burner (abstract, line 1), wherein the end closure device (25) is configured to fit on the discharge vessel (8). (Column 6, lines 2-3)

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Kariya et al (US Patent No. 4,972,119).

Regarding Claim 15, Kariya discloses, at least in Figure 4, a the high-pressure burner (title), further comprising an end part (38) configured to fit into the discharge vessel (12)(shown in Figure 1), wherein the end closure device (30)(sealing layer) is configured to fit on the end part (38) (Column 8, lines 5-13).

Claims 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichelbronner et al (US Patent No. 5,404,077).

Regarding Claim 10, Eichelbronner discloses, at least in Figures 1 and 6, a method of manufacturing a ceramic (abstract, line 1) gas tight high pressure burner (lamp, (title)) comprising:

a) at least one end closure (11) device

b) at least two feed-through members (6 in Figure 1)) and c) at least one discharge vessel (8, Figure 1) with at least one end opening (Column 1, lines 27-30) whereby the manufacturing method comprises the acts of: i) filling said discharge vessel with an ionizable filling (Column 1, line 18) through at least one opening (line 18)

and ii) closing said at least one end opening (element (11) seals the end opening) by arranging a feed-through (29) in said opening followed by gas tight connecting (element (11) is a seal) said feed-through to the end closure device (11, the seal) or to the discharge vessel, whereby a gas tight high-pressure burner is obtained, at least one end opening has a cross section that varies along a longitudinal direction. (In Figure 6, the feed through (29) varies in cross section as it enters the discharge vessel and thus the feed through opening would also vary.

Regarding Claim 11, Eichelbronner discloses, at least in Figure 6, the method wherein an outer cross-section of said at least one end opening is equal or greater than an inner cross-section of said at least one end opening. (Figure 6 shows that the outer portion of the feed through opening (29) is made greater in cross section than the inner opening).

Regarding Claim 12, Eichelbronner discloses, at least in Figures 1 and 6, a high-pressure burner comprising: a discharge vessel (8, Figure 1) including an ionizable filling (Column 1, line 18) an end closure device (11) located at an end of the discharge vessel (8) the end closure device (11) having a feed-through opening (29); and a feed-through (shown in Figure 1 as (6)) passing through the feed-through opening (29) wherein the feed-through opening (29) has a cross-section that varies along a longitudinal direction of the discharge vessel. (see Figure 6).

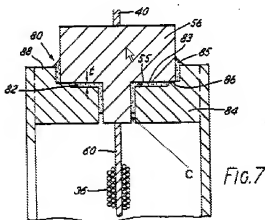
Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelbronner et al (US Patent No. (5,404,077) in view of Honda et al (US Patent No. 6,774,566) and further in view of Takahashi et al (US Patent No. 6,479,950) and Odell et al (US Patent No. 4,988,916).

Odell, Figure 7, is shown below.



Regarding Claim 1, Eichelbronner discloses, at least in Figures 1 and 6, a ceramic (abstract, line 1), gas tight high pressure burner (abstract, lines 1-2, and Column 7, line 36 teaches gas tight) comprising an ionizable filling (Column 1, lines 15-18), a discharge vessel (8) having a discharge cavity (see figure 1) and at least one end closure device (11) at least one

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end of the discharge vessel (8), the at least one end closure device (11) having a feed-through opening (29) and at least one feed-through (Figure 1 (6)) passing through the feed-through opening (the opening in Figure 1 is (10)), wherein the feed-through opening has a cross-section that varies along a longitudinal direction. (see Figure 6, (29) varies in cross section longitudinally).

Eichelbronner fails to disclose having a discharge cavity (1a1) with a volume from 3 mm to 30 mm³ and wherein the feed-through opening has a cross-section that varies along a longitudinal direction whereby the internal filling pressure of the discharge cavity is ≥ 0.1 MPa, at room temperature and forming a crevice (C,above) between the at least one end closure device and the discharge vessel.

Honda teaches a discharge cavity (1a1) with a volume from 3 mm to 30 mm³ (Column 8, lines 53-55, 10mm³) in order to provide a high pressure lamp that is compact (Column 8, line 49).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the volume of the discharge cavity, as taught by Honda, in the discharge lamp of Eichelbronner to provide a high pressure lamp that is compact.

Takahashi teaches whereby the internal filling pressure of the discharge cavity is ≥ 0.1 MPa, at room temperature (Column 10, lines 28-30 (1.4 Mpa at room temperature) because increasing the pressure would increase the density of the gases resulting in an increase in light emitted.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the high pressure of gases, as taught by Takahashi, into the discharge lamp of Eichelbronner, in order to increase the light output.

Eichelbronner, as modified by Honda and Takahashi, fails to disclose the at least one end closure device forming a crevice between the at least one end closure device and the discharge vessel.

Odell teaches, in Figure 7 above, an end closure device (56) forming a crevice (C) between the at least one end closure device (56) and the discharge vessel (84). The reason for allowing this crevice would be to allow a sufficient margin so that the sealing material (82) would not be forced into the discharge chamber.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the crevice, as taught by Odell, in the high pressure discharge lamp of Eichelbronner, as modified by Honda and Takahashi, to allow a sufficient margin so that the sealing material (82) would not be forced into the discharge chamber.

Regarding Claims 3 and 4, Eichenbronner discloses, at least in Figure 6 (above), the ceramic gas tight high- pressure burner, further comprising at least one connection means (31) for gas tight (Column 8, line 47), connecting the feed-through (shown in Figure 1 as (6)) to the discharge vessel. Element (31) would connect the feed through (6) to the feed through opening (29) which is connected to the discharge vessel (8) by the end closure device (11) which is a sealant, thereby connecting the feed through to the discharge vessel..

Regarding Claim 6, Eichelbronner discloses, at least in Figure 6, the ceramic gas tight high- pressure burner, and wherein the feed-through opening (29) has a shape of at least one of a cone and wherein an outer cross- section of the feed-through opening (29) is equal or greater than an inner cross-section of the feed-through opening. (see Figure 6).

Regarding Claim 8, Eichelbronner, as modified by Honda and Takahashi, fails to exemplify the ceramic gas tight high- pressure burner wherein at least one end part of the discharge vessel is at least partly coated with a layer that improves connecting means bonding strength, whereby the layer is at least partly located between an end part of the discharge vessel and the at least one end closure device to make the end cap closure device gas tight.

Odell teaches, in Figure 7, the ceramic gas tight high- pressure burner wherein at least one end part of the discharge vessel (84) is at least partly coated with a layer (82)(sealant) that improves connecting means bonding strength, whereby the layer is at least partly located between an end part of the discharge vessel (84) and the at least one end closure device (56) to make the end cap closure device gas tight.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the sealant between the end closure device and the discharge vessel, as taught by Odell, in the high pressure discharge lamp of Eichelbronner, as modified by Honda and Takahashi, in order to make the lamp gas tight.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelbronner (077) in view of Honda (566) and Takahashi (950) and Odell (916) and further in view of Wei et al (US Patent No. 5,861,714).

Regarding Claim 7, Eichelbronner, as modified by Honda, Takahashi and Odell, fails to disclose, the ceramic gas tight high- pressure burner wherein the at least one end closure device comprises a cermet.-material having a gradient.

Wei teaches the ceramic gas tight high- pressure burner wherein the at least one end closure device comprises a cermet.-material having a gradient to eliminate cracking in cermet due to thermal stresses. (The abstract, lines 1-6. Also, see Column 16, line 35, (radially graded

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cermet end plug), furthermore, the title teaches that the envelope is ceramic and the abstract, lines 3-10 teaches that it contains a sealed (gas tight) gas).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the graded cermet plug, as taught by Wei, in the discharge lamp of Eichelbronner, as modified by Honda, Takahashi and Odell, to eliminate cracking in cermet due to thermal stresses.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance.

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 2, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in Claim 2, and specifically comprising the limitation of "the ceramic gas tight high- pressure burner wherein the crevice is tubular-shaped and has a volume of $\geq 0 \text{ mm}^3$ and $\leq 1.7 \text{ mm}^3$ ".

Response to Arguments

Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONALD L. RALEIGH whose telephone number is (571)270-3407. The examiner can normally be reached on Monday-Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Raleigh/
Examiner, Art Unit 2879

/Mariceli Santiago/
Primary Examiner, Art Unit 2879